

GEOGRAPHIC NEWS BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated under the Federal law as a non-commercial institution for the increase of geographic knowledge and its popular diffusion.)

General Headquarters, Washington, D. C.

Contents for Week of October 15, 1928. Vol. VII. No. 13.

Note to Teachers.—This is the first issue of the Geographic News Bulletins for the school year, 1928-29. No Bulletins were issued during the summer vacation months.

1. Russia of To-day a Geographic Puzzle.
2. The Twelve Longest Rivers.
3. The Province of Chihli, China's Chronic Battlefield.
4. Where Alphabets Come From.
5. Natal, Brazil: South America's "Air Door."

Also, please, see important notice on back of this cover page.



© Photograph by Charles H. Kragh

WOMEN GRINDING WHEAT TO REMOVE THE HUSK IN CHIHLI, CHINA

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HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic News Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers for one year upon receipt of 25 cents (in stamps or money order). Entered as second-class matter, January 27, 1922, at the Post Office at Washington, D. C., under the Act of March 3, 1879. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized February 9, 1922.

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Russia of To-day a Geographic Puzzle

A YEAR ago Russia announced that the Union had 146,304,931 inhabitants according to a new census. But recently census enumerators, browned by the sun-swept sands of the Kara Kum Desert in the Transcaspien region, upset these figures when they reported 250,000 nomad Soviet subjects who had not been counted.

Although the Union of Socialist Soviet Republics is three times the area of the United States it has but 26,000,000 more inhabitants.

6,000 Miles Across

"Russia owns one-seventh of the land area of the world" has become a stock phrase among the Soviet orators. It is the world's largest continuous country and is second only to the British Empire among the world's landholders. Unlike the British Empire, however, its possessions are all within two continents—Europe and Asia. A trip across the Union from its western to its eastern border would nearly equal a round trip from New York to San Francisco.

From the borders of Poland and Rumania on the west, the Union stretches across half of Europe and northern Asia to the easternmost point of Kamchatka, which extends into the Pacific Ocean. Its bleak islands of the north are nearer the North Pole than Spitsbergen, and its southern frontiers are on the parallel of Norfolk and San Francisco.

To tour the Union a traveler needs a year-round wardrobe. The government operates a radio station 650 miles north of the Arctic Circle where the Eskimos huddle themselves in numerous layers of furs. Along the northern part of Russia and Siberia, the traveler sees the Samoyed, snugly wrapped, emerge from his hut or dugout, straddle the reindeer, which is his only transportation, and trot across a land of perpetual snow. The whole range of temperate climates is encountered in the middle region while in the extreme south, where other Soviet subjects sit cross-legged on camels, straw hats and summer linens are uncomfortably warm.

Divides into Six Republics

Politically the Union is divided into six constituent republics. They in turn comprise more than thirty autonomous units in many of which the inhabitants widely differ in race, languages, customs, costumes and culture.

The Russian Socialist Federated Soviet Republic, the largest of the republics, includes most of European Russia and Siberia. It is twice the size of Canada with a population nearly equal to that of the whole French Empire, which counts its possessions in both hemispheres. The Turkoman Soviet Socialist Republic and the Uzbek Soviet Socialist Republic, lying between the Caspian Sea and the backdoor of China, are about six times as large as New York State but with a population about equal to that of New York City.

The Transcaucasian Socialist Federal Soviet Republic, which includes Georgia, Azerbaijan and Armenia, also has a population nearly equal to New York City and its area is slightly less than twice that of the State. The Ukrainian Soviet Socialist Republic, occupying the southwestern corner of Russia, is slightly smaller than California in area with a population less than that of San Francisco. The White Russian Soviet Socialist Republic, which is the "Rhode Island of the

A Gift to Education—How Teachers May Cooperate

THE GEOGRAPHIC NEWS BULLETINS are a gift of the National Geographic Society to education. This is the first issue of 30 numbers, each containing five illustrated bulletins, to be mailed weekly during the current school year. The bulletins report the geography of recent events of world importance.

Because these Bulletins represent a substantial gift to schools from The Society's educational funds, the expense of advertising or circulation promotion cannot be undertaken as would be the case with a commercial publication. The Society must rely upon supervisory officials and teachers to call them to the attention of their colleagues who might use them effectively. This should be done promptly so that applicants may be put upon the mailing list to receive the early issues.

The following order form may be used:

School Service Department,
National Geographic Society,
Washington, D. C.

Kindly sendcopies of the Geographic News Bulletins for the school year beginning with the issues of.....for classroom use, to Name.....

Address for sending Bulletins.....

City State

I am a teacher in.....school.....grade.

Many subscriptions expire with this issue. No further notice of expiration will be sent. Former subscribers are requested to renew promptly, otherwise files will be incomplete as back numbers cannot be supplied. Each request should be accompanied by 25 cents to cover mailing costs for the 30 issues of the school year.



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A WOOD CARVER AND MOSAIC WORKER IN RUSSIAN TURKESTAN
(See Bulletin No. 1)

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The Twelve Longest Rivers

OF THE world's dozen longest rivers, six are in Asia and three in Africa. The New World is represented only by the Amazon in South America and the Mississippi and the Mackenzie in North America, though if the Missouri be considered apart from the Mississippi it would take rank in its own right.

The longest single river is the Nile, measuring some 4,000 miles from head to mouth. The Nile is further distinguished in that it has no tributaries for the last 1,500 miles of its course to the sea. During this stretch its waters are considerably reduced in volume by evaporation and irrigation, so that it grows smaller instead of larger toward its mouth.

All Climates Are Represented

Other African rivers among the length-scoring twelve are the Niger and the Congo, both fed by the tropical rains of hot regions near the Equator. In a general way they more nearly resemble South America's representative, the Amazon, than the great streams of the colder northern continents.

Of Asia's six longest rivers, four are in Siberia, the Ob, Yenisei, and Lena flowing north into the Arctic Ocean and the Amur emptying into an arm of the Pacific. The other two are the Yangtze and Hwang, or Yellow River of China.

These twelve river basins represent the greatest variety of climate and civilization. The Amazon and the Congo flow through lush equatorial jungles inhabited by birds of brilliant plumage, wild animals and savage tribes, while the mouths of the Yenisei and the Lena are above the northern timber line and their valleys support the sparsest population. The Mississippi and the Yangtze flow through established, if divergent, civilizations, with rich cities along their banks like jewels on a string. The Nile is one of the cradles of world history; the Mackenzie is still a frontier stream.

"Up-Hill" Rivers

From the point of view of a world map five of the dozen rivers "flow up-hill," that is, flow to the north. These are the Nile, Mackenzie, Ob, Yenisei, and Lena. The Mississippi and Niger flow south. The Amur, Yangtze, Hwang and Amazon run eastward. Only the Congo points toward the west.

All these streams overflow their banks at intervals but the results are strangely different. In the case of the Mississippi and the Yangtze, floods are national disasters bringing untold suffering to millions. The annual overflow of the Nile with resulting fertilization of the valley by the deposit of silt is the source of the wealth of Egypt. The Hwang, or Yellow River, from its habit of overflowing its banks and changing its entire course at intervals is known as the "scourge of China."

The Amazon and the Congo lie almost under the Equator, and the other ten longest rivers are in the Northern Hemisphere. Four flow into the Arctic Ocean. A reason is not far to seek. The greatest land masses are in the northern half of the world, and without large land areas long rivers are impossible. The smaller continents of Australia and Europe are not represented in the dozen. Similarly, the reason for the longest rivers flowing to the north and east is that the longest continental slopes extend in those directions.

Bulletin No. 2, October 15, 1928 (over).

constituent Republics," is about 40 times larger than the New England States with twice the population of Providence.

How The Tsars Expanded The Empire

The expansion of Russia began more than a thousand years ago. First the country was divided into numerous independent principalities and governed by princes. In the fifteenth century when the tsars took the reins of government, a great empire began to spread over the Eastern Hemisphere. Ivan the Third was the famous ground gainer on the Russian gridiron and earned the title "Gatherer of Russian Earth." Peter the Great, Catherine the Great, Alexander I and Nicholas I, however, should share the honors for extending the domain.

The Union is not quite as large as Russia was prior to 1917 under the tsars, for Esthonia, Latvia, Poland and Finland have been granted their freedom and Besarabia, disputed territory between Rumania and the Ukraine, now is occupied by the Rumanians. These areas comprise 260,493 square miles with about 25,000,000 inhabitants.

Bulletin No. 1, October 15, 1928.



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LOADING COTTON AT YURIMAGUAS, PERU, FOR THE ATLANTIC SEABOARD

Since the collapse of wild rubber, formerly the chief product of the Amazon Basin district of Peru, cotton planting is assuming some importance. Founded in 1709 by a Spanish missionary, the flourishing town of Yurimaguas takes its name from an Indian tribe which fled from its home in the Amazon Basin to escape slave hunters. The women of the tribe are believed by some authorities to have been the Amazons encountered by Orellana when he descended the river which bears their name (See Bulletin No. 2).

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The Province of Chihli, China's Chronic Battlefield

CHIHLI Province, China, scene of recent clashes between the Chinese warring factions, is the "Flanders Field" of China.

During the hostilities of 1924 southern Chihli bore the brunt of Chinese civil war in the north and last spring Hokiesfu, 100 miles south of Peking, was retaken by the northern armies after a brisk battle. The capture of Hokiesfu reestablished one of Peking's main lines of defense which stretches across Chihli from Paotingfu to Tsangchow.

The New England of China

Without Manchuria, which surrounds China's northeastern corner, Chihli would not only occupy the position of New England in the United States but its similarity to Yankee America also extends to its shape, climate and topography. Chihli even has a Cape Cod Bay formed by the Gulf of Chihli with the blunted peninsula of Shantung Province forming the cape.

The Chinese province, however, covers nearly twice the area of the New England States and has a fourth the population of the entire United States, most of which is concentrated in the plains country extending for about 100 miles from the coast. Nearly every square foot of this area is occupied by cities, villages, orchards, grazing land and small farms.

Travelers in Chihli are astonished by the large production of agricultural products in the province with the crude methods and devices used by the farmers. In many sections grain is winnowed in the manner employed in Egypt in ancient times. Threshing machines consist of many bladed paddles with which the grain is beaten, or large rough roller stones drawn over the grain by plodding bullocks. It is a common sight in the remote districts to see women squatting beside large stone troughs pounding wheat for daily consumption, and now and then one sees a blind-folded horse trotting around in a circle hitched to a huge grinding stone. In some sections of the province the work of the women and the horse is done by windmills with enormous matting blades, or crude waterpower machinery.

Exports Pig Bristles, Hairnets and Goats' Beards

As in Massachusetts, many of Chihli's industrial cities are situated up the various rivers, away from the sea. Tientsin, which ranks next to Peking among the cities of the province, sends a large bulk of goods to Europe and the United States, including such articles as feathers, goats' beards, fox tails, licorice, human hair, pig bristles and lanterns. When hairnets were more fashionable, Chihli hairnets were sold in our markets.

Visitors to Tientsin are apt to judge the whole province by the modern aspect of that city, but the inhabitants of the interior regard the modern western touch as barbaric. Automobiles traverse its streets and at every corner where there is any traffic at all, there is a policeman. Incidentally, the officers not only direct traffic but water, clean and light the thoroughfares. The old-fashioned jinrikisha is giving way to the pedicab, a combination jinrikisha and bicycle. In the meantime, the farmer continues to rely upon the strength of his back, a home-made wheelbarrow or a crude two-wheeled cart for transportation.

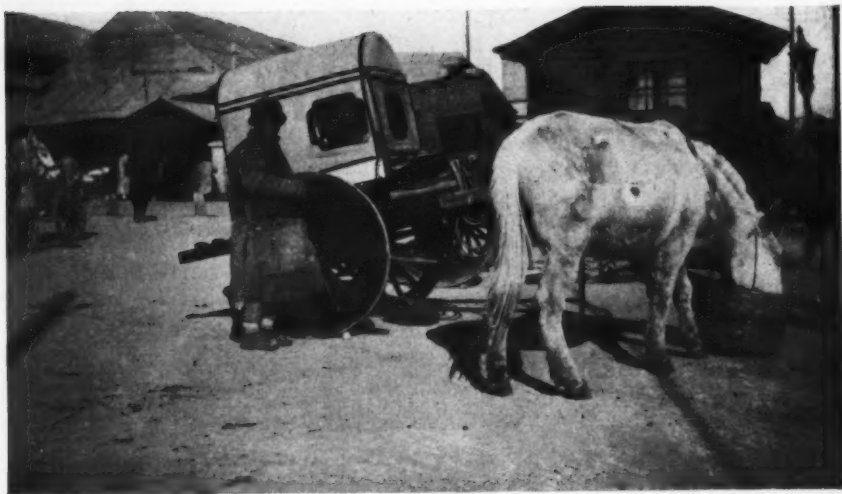
Taku, 25 miles east of Tientsin on the Gulf of Chihli, takes more pride in its

Why Rivers Are Highways of Civilization

The Yangtze and the Mississippi are lined with wealthy cities largely because of their location in the Temperate Zone. The Tropic Amazon, Niger, and Congo are too hot; the Mackenzie and the Siberian rivers are too cold for the favorable growth of towns. The Nile Valley beyond Cairo is a mere strip of green from fifteen to thirty miles wide between two burning deserts. The Hwang is too variable in its habits to encourage navigation or river ports.

From the earliest times these long rivers have furnished high roads for the exploration of continental interiors. Nero sent an expedition to discover the headwaters of the Nile which failed to reach its objective. Russian penetration of Siberia followed the great river beds. The Amazon and the Congo are still highways of discovery. Head reaches of the Yangtze are veiled in Asiatic obscurity. The Niger was the river of romance in the great days of Timbuktu. The histories of the world's river basins have been the history of the world's empires. A great river is both a roadway and a source of life. The world's twelve longest rivers tap the roots of its history as well as the roots of its resources.

Bulletin No. 2, October 15, 1928.



Photograph by T. A. Muller © National Geographic Society

ALMOST AS FASCINATING AS ITS CAMELS AND DONKEYS ARE THE CARTS OF PEKING
(See Bulletin No. 3)

An excellent article for supplementary reading on China, describing its peculiar customs, rich agriculture, and civic life, will be found in the *National Geographic Magazine* for October, 1927. The article, by Dr. Frank J. Goodnow, is entitled "The Geography of China: The Influence of Physical Environment on the History and Character of the Chinese People."

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Where Alphabets Come From

THE decision of Turkey to throw overboard the alphabet she has used for many centuries, and to replace it with the alphabet of western Europe and the Americas, is not so revolutionary a step as it at first appears.

It is not as if Turkey were uprooting some cherished cultural growth and setting up in its place a foreign substitute. No true alphabet can be found in use to-day by a people who has originated it. When it comes to alphabets all the world has borrowed. It is an amazing thing, but the problem of resolving human speech into its thirty-odd sounds and representing them by symbols seems to have been solved only once—within historic times at least—and from this happy analysis and invention all the true alphabets today appear to have descended.

English Alphabet From Latin

The English alphabet came directly from the Latin. It is, in fact, the same alphabet that Rome used save for such minor changes as the addition of a separate "J" (the Latin "I" served for both "I" and "J"), and the expansion of the Latin "UV" into "UVW."

The Romans, in turn, borrowed their alphabet from the Greeks, changing the forms of the letters somewhat and dropping some characters. And the Greeks, as evidence and tradition show, took their letter system from the Phoenicians, even retaining the names with slight variations.

In passing the alphabet through their hands, the Greeks gave it one of its most important additions. They added definite vowel symbols to the Phoenician alphabet which consisted solely of 22 consonants. The Greeks "tinkered" further with the alphabet so that the Athenian version, including vowels, came to have 24 letters. The Phoenicians wrote from right to left; the Greeks adopted the left to right direction now employed by all the western world.

We Owe Alphabet to Ancient "Babbits"

The greatest problem in connection with the alphabet is to determine where the Phoenicians got it. There have been widely divergent theories as to this. It has been variously suggested that the 22 characters were adopted from the hieroglyphics and the hieratic writing of Egypt, the cuneiform characters of Babylon, and symbols of the Hittites, Cretans, and ancient Greeks. No evidence so far found seems sufficient to determine this matter. Probably the most generally accepted theory is that the Phoenicians, familiar because of their trading voyages with the various cumbersome writing systems around the Mediterranean, chose from them such symbols as they needed, stripped off the complications, and simplified writing for the first time to a nearly true alphabetic basis.

The Phoenicians are supposed to have been urged to this step by the desire to conserve time in keeping their accounts and records of trading ventures. It is to the bustling, impatient "Babbits" of some 3,000 years ago, therefore, that the world probably owes the device that has made possible the great advances in literature and science, and practically all of the continuing activities of civilization.

We take the alphabet—and all these words that are built from it with which to record the shadings of our ideas—so much as a matter of course that it is difficult to realize that for thousands and perhaps tens of thousands of years man had no better method of recording his thoughts than with a jumble of picture writing.

Bulletin No. 4, October 15, 1928 (over).

water transportation for there is a type of junk for every use—for passengers, for fish, for coal, for long hauls, for short hauls and for rice. All of these and many more have, perhaps, nearly as many different names as various makes of American automobiles.

Great Wall Bisects Province

When Chihli begins to develop its coal deposits in the western mountains, a large industry will be fostered. Marco Polo found that "All over the country of Cathay there is a kind of black stone existing in beds in the mountains which the natives dig out and burn like firewood." The center of the important Chihli salt industry is along the banks of the Pei-ho where there are numerous huge salt mounds and windmills for pumping saline waters into salt fields.

Southern Chihli is traversed by a railroad which links Peking with southern China. Only one railroad along the coast from Tientsin to Mukden serves the north. Another railroad runs westward to the dirty but busy city of Kalgan. The Kalgan route is popular with tourists who contemplate seeing the Great Wall, a section of which is passed en route, while another section lies but a few miles to the west of Kalgan. North of Peking, the Wall bisects the province.

Queer people with queer customs are encountered in the broad expanse of Chihli Province, but, perhaps, more queer is the pronunciation of its name which is not like that of the famous Mexican stew but as if it were spelled "Jeerhlee."

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PLOWING UNDER WATER AND UNDER DIFFICULTIES IN THE CHENG-TU PLAIN

The farmer of northern China knows little of the science of gardening, but much of its method. He has made parts of China rank among the most productive areas in the world. While this under-water mode of cultivation seems unusual to us it is customary in this area of China.

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Natal, Brazil: South America's "Air Door"

NATAL, Brazil, near which the late Major Delprete and Captain Ferrarin landed on their record-making flight from Rome, is the natural "air-door" to South America for all air traffic from Europe and Africa. It is close to Brazil's northeastern corner, the point of land which the New World thrusts nearest to the old.

The airplane and the radio, because of the locations of landing fields and broadcast stations, are making new geographic centers just as railroad junctions have done in the past.

Because of Natal's strategic geographic position in this regard the recently organized air-mail line between Paris and Buenos Aires has established a flying field near the town. Natal has also figured in Brazilian maritime plans, and its harbor is being improved with a view to making it the first port of call for steamships between Europe and ports on the southeast coast of South America.

At South America's Northeast Corner

Cape St. Roque may be considered the real northeast corner of South America. It lies approximately 20 miles north of Natal. The intervening strip of coast is made up of low sand dunes, with here and there a village set among the coco palms. Touros, where the second landing was effected when the flyers became lost in the fog, is about 30 or 40 miles north of Cape St. Roque.

Natal is not directly on the sea but lies about two miles up the river Potenghy, which is also known as the Rio Grande do Norte. It is from this stream that the state of Rio Grande do Norte, of which Natal is the capital, takes its name. The town was founded by the Portuguese more than three and a quarter centuries ago as a military post. In 1633 it was captured by the Dutch and remained in their possession until 1654. Few traces of the Dutch occupation remain.

Has "Animated Freight Trains"

Natal is far removed from the center of Brazilian activity in the south, and still has some touches of the frontier. Southward, railways along the coast connect it with Pernambuco; but only a short bit of trackage extends toward the interior. For the movement of goods to and from the back country the town still depends somewhat on picturesque troops of pack mules and horses in charge of a *tropeiro* and his swarthy, hard-visaged assistants.

Sometimes 100 or more mules and horses, each laden with big bags of cotton or other produce from the interior, thread their way through Natal's streets, with bells tinkling, and muleteers shouting—an animated freight train. On the return trip they carry bales of fabrics, food supplies, and household furnishings.

The muleteers of Rio Grande do Norte and the adjoining states must be a rough and ready lot, for the goods they carry are an irresistible temptation to bandits in the hilly interior, and often the drivers must "shoot their way through." The gradually extending lines of steel in the interior of Brazil are slowly bringing the existence of the picturesque *tropeiro* to an end.

Bulletin No. 5, October 15, 1928.

symbols such as our dollar sign or the ideographs of the Chinese, and syllable characters such as those of the Japanese.

The earliest written records were made in pictures which represented *things* and *actions*. Abstract ideas could be suggested only in the crudest roundabout way. After centuries of use these pictures became conventionalized into symbols, such as the ideograms of the Egyptians, and the Mayas of America, and some of those still used in China to-day.

The next step was a marked departure from the previous development and a tremendously important one. It was to represent by symbols not the things themselves, but instead the *sounds* of the spoken words. For the first time man wrote his language as he spoke it. The sounds of entire words were symbolized at first; then, after a while, the syllables which formed the words. This gave a writing system of considerable fluency. In it were written the Chinese classics (with an admixture of the older ideographs and symbols).

This syllabic writing appeared in a purer form in the cuneiform of Mesopotamia from records in which the modern world has learned of the intimate daily lives of these people of long ago, their business transactions, their highly developed laws, and their religious customs. In Egypt syllabic writing was early developed, but to the end the Egyptians mixed with the syllable characters all the lumber of hieroglyphics and ideograms. The Egyptians even took the final step of adopting symbols for letter sounds; but these, too, they jumbled in with the other varied characters.

The Final Step—The Alphabet

The ultimate step in splitting up the syllables, adopting an alphabet of characters to represent the component sounds of speech, and building all written words from these simple characters, was taken by the Phoenicians, apparently, about 1000 B. C. Records of about 1400 B. C., discovered in the various countries of the eastern Mediterranean, disclose no alphabetic writing; the cuneiform was then in general use even in correspondence between Egypt and Babylon. Records of about 800 B. C. show the Phoenician alphabet in use, and apparently in use for some time. The birthdate of the alphabet is taken roughly as about 1000 B. C.

The resolving of writing into the alphabetic form was somewhat like science's analysis of matter. First, students accepted matter itself; then found it to be composed of molecules. They pushed their analysis further and resolved the molecules into atoms; and these, finally, into electrons, positive and negative. The vowel and consonant symbols, last to be discovered, may be considered the positive and negative electrons of written language, seldom existing alone.

When alphabets came into existence in the Near East, their use spread rapidly, largely through trade channels. Before many centuries they were adopted in northern Africa, the entire Mediterranean region, Arabia, Mesopotamia, Armenia, and Persia. Some students have asserted that the Brahmi alphabet of India originated independently; but others are convinced that this alphabet, too, was introduced from Syria (the home of the Phoenicians) about 800 B. C. Even the runic alphabet of the Norsemen is believed to have been developed from a Greek alphabet early in the Christian era.

The Aramean alphabet was developed from the Phoenician on the edge of the Arabian desert, and from this grew the Hebrew and Arabic alphabets. When the Mohammedan religion began to spread in the seventh century A. D. it took with it the Arabic alphabet. When they became Moslems the Turks adopted the Arabic alphabet.

The Latin alphabet now to be adopted by the Turks, records their language-sounds more satisfactorily, and in addition contains about one-third as many characters as the Arabic. The number of the Arabic characters is swelled by the use of different forms of each letter at the beginning of words, within them, and as terminal letters. Educators believe that heavy illiteracy in Turkey is largely due to the complexity of the Arabic alphabet, and that school children can learn the new alphabet in a small fraction of the time devoted to mastering the old.

How the Bulletins are Indexed and Used

Teachers will note that each Bulletin is complete on one sheet, and that the sheets fit the files for supplementary material commonly used in schools.

With the last number of each volume (the volumes comprising 30 issues) the Bulletins are indexed by places, subjects, and also by various teaching classifications, such as "Industrial," "Economic," "Commercial," "Nature Study," "General Science," and so forth.

Frequently the Bulletins give reference to articles in *The National Geographic Magazine* which, with their more complete descriptions and numerous illustrations, many in color, supplement the facts presented in the Bulletins. Teachers should keep in mind, however, that additional material on the subjects of the Bulletins usually can be located in *The National Geographic Magazine* by referring to "The Cumulative Index to *The National Geographic Magazine*, 1899 to 1927, inclusive," a volume which is to be found along with bound copies of *The Geographic* in public libraries and school libraries.



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THE DRUMS FOR THE NEW STATE OF UZBEK

This republic consolidates administratively Uzbek territory in Bokhara, Khiva, and Turkestan. It is one of a number of new units recently formed in Asiatic Russia which are not yet to be found in reference books or textbooks. Many teachers paste such Bulletins as that on "Russia of Today a Geographic Puzzle" in texts, or file them for ready reference (see suggestion above). An authoritative article on the new Russia is Junius B. Wood's "Russia of the Hour" in the *National Geographic Magazine* for November, 1926.

